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Appl. No. 10/693,697
Response to 12/07/2006 Office Action
Atty. Dkt. M140-365

In the Claims:

Cancel claims 27-40.

41. (Once Amended) A method comprising:

sending a first command from an interrogator to a plurality of RFID devices, the first command comprising a first set of fields, wherein the first set of fields includes a first bit string and describes a first memory range that starts at a first bit location;

receiving the first command by an RFID device of the plurality of RFID devices, and in response, the RFID device comparing the first bit string to a first value stored in a first portion of a memory of the RFID device corresponding to the first memory range;

sending a second command from the interrogator to the plurality of RFID devices, the second command comprising a second set of fields, wherein the second set of fields includes a second bit string and describes a second memory range that starts at a second bit location offset from the first bit location by two or more bits;

receiving the second command by the RFID device, and in response, the RFID device comparing the second bit string to a second value stored in a second portion of the memory of the RFID device corresponding to the second memory range; and

receiving a reply from the RFID device based, at least in part, on a first result from the comparing of the first bit string to the first value, and on a second result from the comparing of the second bit string to the second value, wherein the reply includes a random number generated by the RFID device.

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42. (Once Amended) The method of claim 41, wherein the reply further includes an identification code that identifies an object to which the RFID device is attached.

43. (Once Amended) The method of claim 41, further comprising sending a third command from the interrogator to the plurality of RFID devices after sending the second command and before receiving the reply from the RFID device.

44. (Once Amended) The method of claim 41, wherein the reply is sent from the RFID device in accordance with a slotted arbitration scheme.

45. (Once Amended) A method comprising:
sending first and second radio frequency (RF) signals to a plurality of RFID devices;
receiving a reply from at least one RFID device, the reply indicating that a first number stored in a memory of the RFID device bounded at a first location indicated by the first RF signal is equal to a first value indicated by the second RF signal, the reply including a random number independently generated by the RFID device; and
sending a third RF signal, the third RF signal indicating a second number stored in the memory of the RFID device bounded at a second location that is offset by two or more bits from the first location.

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46. The method of claim 45, further comprising detecting a collision in the reply, and wherein sending the third RF signal is done in response to detecting the collision in the reply.

47. (Once Amended) The method of claim 45, wherein the reply includes an identification number.

48. (Once Amended) The method of claim 45, wherein the reply is received in accordance with a slotted arbitration scheme.

49. (Once Amended) The method of claim 48, wherein the random number is 16 bits.

50. (Once Amended) The method of claim 45, further comprising the RFID device picking a random value from a range of integers, the random value corresponding to a slot.

51. (Once Amended) The method of claim 50, wherein the fourth RF signal is sent to the plurality of RFID devices before receiving the reply from the RFID device, the fourth signal indicating a second value, wherein the reply indicates that the second value is equal to a third number stored in the RFID device.

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52. (Once Amended) The method of claim 45, further comprising individually accessing the RFID device including sending the random number to the RFID device.

53. (Once Amended) The method of claim 52, wherein the random number is 16 bits.

54. (Once Amended) An interrogator that, when operated, performs a method comprising:

transmitting a first command to select a group of RFID devices based, at least in part, on a first memory range beginning at a first bit location;

transmitting a second command to select a subgroup of the group of RFID devices based, at least in part, on a second memory range beginning at a second bit location, wherein the second bit location is shifted by two or more bits from the first bit location; and

receiving a reply from at least one RFID device of the subgroup of RFID devices, the reply including a random number generated by the RFID device.

55. (Once Amended) The interrogator of claim 54, wherein the method further comprises transmitting a third command after transmitting the second command and before receiving the reply, the third command including a at least one field configured to select at least a portion of the subgroup of RFID devices to reply to the third command.

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56. (Once Amended) The interrogator of claim 55, wherein the method further comprises transmitting a signal, the signal associated with a slotted arbitration scheme.

57. (Once Amended) The interrogator of claim 54, wherein the reply further includes an identification number that identifies an object to which the RFID device is attached.

58. (Once Amended) The interrogator of claim 54, wherein the method further comprises transmitting a command that causes the subgroup of RFID devices to independently generate random numbers.

59. (Once Amended) The interrogator of claim 54, wherein the method further comprises transmitting a signal after transmitting the second command and before receiving the reply, the signal associated with slot values in accordance with a slotted arbitration scheme.

60. (Once Amended) The interrogator of claim 59, wherein the reply further includes an identification number that identifies an object to which the RFID device is affixed.

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61. (Once Amended) The interrogator of claim 54, wherein the method further comprises transmitting a 16 bit random number to the RFID device to access the RFID device.

62. (Once Amended) The interrogator of claim 61, wherein the reply further includes an identification number that identifies an object to which the RFID device is attached.

63. (Once Amended) A method comprising:
providing an RFID device affixed to an object to identify the object, the RFID device storing an identification number;

sending a first command from an interrogator, the first command configured to select a group of RFID devices based, at least in part, on a respective first value stored in each respective RFID device of the group of RFID devices, the respective first value bounded at a respective first bit location within a memory of the respective RFID device;

sending a second command from the interrogator after sending the first command and before sending any other query commands from the interrogator, the second command configured to select a subgroup of the group of RFID devices based, at least in part, on a respective second value stored in the respective RFID device of the group of RFID devices, the respective second value bounded at a respective second bit location within the memory of the respective RFID device, wherein the second bit location is at least two bits away from the first bit location; and

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receiving a random number from the RFID device, the RFID device belonging to the subgroup, the random number independently generated by the RFID device and being separate from the identification number.

64. (Once Amended) The method of claim 63, wherein the respective first value of the RFID device comprises at least a portion of the random number.

65. (Once Amended) The method of claim 63, further comprising receiving the identification number from the RFID device.

66. (Once Amended) The method of claim 65, further comprising sending the random number to the device.

67. (Once Amended) The method of claim 66, further comprising sending a third command, the third command associated with a slot value .

68. (Once Amended) The method of claim 63, further comprising sending a third signal from the interrogator, the third signal being associated with a slotted random anticollision algorithm.

69. (Once Amended) The method of claim 68, further comprising receiving the identification number from the RFID device.

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70. (Once Amended) A system comprising:

an RFID reader configured to send a first command to indicate a first bit string and a first range of bits, followed, without any intervening query commands, by a second command to indicate a second bit string and a second range of bits, wherein the first range of bits differs from the second range of bits by at least two bits;

an object associated with an identification code; and

an RFID tag affixed to the object and storing the identification code, the RFID tag configured to compare the first bit string to a first value stored in memory corresponding to the first range of bits, to compare the second bit string to a second value stored in memory corresponding to the second range of bits, to backscatter a self-generated random number, and to backscatter the identification code.

71. (Once Amended) The system of claim 70, wherein the reader is further configured to send the random number to the RFID tag.

72. (Once Amended) The system of claim 71, wherein the RFID tag is further configured to pick a random slot value.

73. (Once Amended) The system of claim 72, wherein the reader is further configured to send a third command to instruct the RFID tag to generate the random number.

Cancel claims 74-76.